

What are Cardiovascular Diseases?

CVDs are a group of disorders of the heart and blood vessels including coronary heart disease, cerebrovascular disease, peripheral arterial disease, rheumatic heart disease, congenital heart disease, deep vein thrombosis and pulmonary embolism.



Worldwide an estimated **17.8** million people died from CVDs in 2017



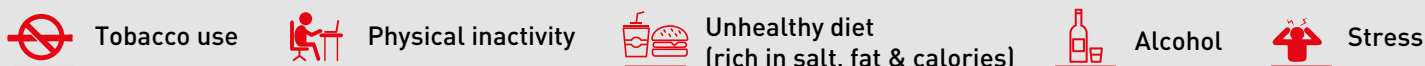
1/3rd of all global deaths

In India, CVDs contributed **13.6%** of the total DALYs (Disability Adjusted Life Years) and **26.6%** of all deaths in 2017

Risk Factors

Modifiable

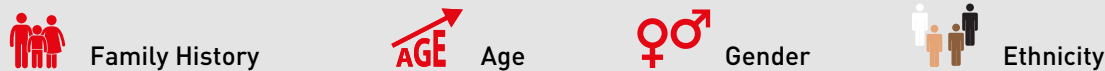
Behavioural Risk Factors:



Metabolic Risk Factors:



Non-Modifiable



Key Messages to Protect Cardiovascular Health

- Tobacco use, an unhealthy diet and physical inactivity increase the risk of heart attacks and strokes.
- Adults aged 18-64 yrs should do at least 150 minutes of moderate-intensity aerobic physical activity throughout the week or do at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week or an equivalent combination of moderate- and vigorous-intensity activity.
- Eating at least five servings of fruit and vegetables a day, and limiting salt intake to less than one 2g per day also helps to prevent heart attacks and strokes.

Types of Cardiovascular Diseases and their Signs and Symptoms

Stable Angina	<ul style="list-style-type: none"> • Pain that occurs on exertion/emotion and is relieved by rest • Usually lasts for 5-20 minutes • Site of pain is retrosternal/jaw/upper arm 	
Arrhythmia	<ul style="list-style-type: none"> • Palpitation • Tachycardia • Bradycardia • Chest pain or discomfort 	<ul style="list-style-type: none"> • Shortness of breath • Light-headedness • Dizziness • Syncope or near syncope
Heart Failure	<ul style="list-style-type: none"> • Dyspnoea on exertion • Orthopnoea • Paroxysmal nocturnal dyspnoea • Ankle swelling or dependant edema • Fatigue 	<ul style="list-style-type: none"> • Elevated jugular venous pressure • Hepatojugular reflux • Third heart sound (gallop rhythm) • Laterally displaced apical impulse • Bi-basal crepitation or crackles
Congenital Heart Disease	<ul style="list-style-type: none"> • Heart Murmur • Cyanosis • Breathlessness on effort • Poor growth • Arrhythmia 	<ul style="list-style-type: none"> • Extreme tiredness and fatigue • Fainting during exertion • Swelling in the hands, legs, abdomen and around the eyes
Acute Coronary Syndrome	<p>Chest pain for >30 minutes: most common</p> <ul style="list-style-type: none"> • Heavy, squeezing and crushing • Central portion of the chest and/or the epigastrium and on occasion, it radiates to the left shoulder or angle of jaw • Accompanied by weakness, sweating, nausea, vomiting, anxiety, and a sense of impending doom 	<ul style="list-style-type: none"> • Accompanied with shortness of breath, which may progress to pulmonary edema <p>Other less common presentation:</p> <ul style="list-style-type: none"> • Epigastric pain • Shortness of breath • Left shoulder pain
Acute Rheumatic Fever & Rheumatic Heart Disease	<p>Revised Jones Criteria (2015):</p> <p>Major Criteria-</p> <ul style="list-style-type: none"> • Carditis- clinical or subclinical • Arthritis- Polyarthritis only (in low risk population) and polyarthritis or monoarthritis, polyarthralgia (in moderate or high risk population) • Chorea • Erythema marginatum • Subcutaneous nodules <p>Minor Criteria-</p> <ul style="list-style-type: none"> • Polyarthralgia (low risk population), Mono or polyarthralgia (moderate/high risk population) • Fever->38.5°C (low risk population) & >38.0°C (moderate/high risk population) • ESR≥60 mm (low risk population) & ≥60 mm (moderate/high risk population) in the first hour and/or CRP≥3.0 mg/dL • Prolonged PR interval 	
Stroke	<p>Acute onset of:</p> <ul style="list-style-type: none"> • Unilateral or weakness of face, arm or leg • Confusion, trouble speaking or understanding 	<ul style="list-style-type: none"> • Diminished vision • Trouble walking, dizziness, loss of balance or coordination • Severe headache with no known cause
Peripheral Vascular Disease	<ul style="list-style-type: none"> • Asymptomatic (mostly) • Claudication 	<ul style="list-style-type: none"> • Rest pain in the limbs • Non healing wound/ulcer • Skin discoloration or gangrene
Deep Vein Thrombosis & Pulmonary Embolism	<p>Deep Vein Thrombosis:</p> <ul style="list-style-type: none"> • Swelling with pain or tenderness • Increased warmth, cramps, or aching in the affected area (usually the calf or thigh) • Red or discolored skin 	<p>Pulmonary Embolism:</p> <ul style="list-style-type: none"> • Dyspnoea • Pleuritic pain with deep breathing • Haemoptysis • Tachycardia • Crepitation

References:

1. India State-Level Disease Burden Initiative CVD Collaborators. The changing patterns of cardiovascular diseases and their risk factors in the states of India: the Global Burden of Disease Study 1990-2016. *Lancet Glob Health*. 2018;6(12):e1339-e1351. doi:10.1016/S2214-109X(18)30407-8
2. Calvin Ke et al. Divergent trends in ischaemic heart disease and stroke mortality in India from 2000 to 2015: a nationally representative mortality study. *The Lancet Global Health* 2018; 6. e914-e923. 10.1016/S2214-109X(18)30242-0, available from [https://doi.org/10.1016/S2214-109X\(18\)30242-0](https://doi.org/10.1016/S2214-109X(18)30242-0) [cited 2019 May 16]
3. Walter Johnson, Oyere Onuma, Mayowa Owolabi & Sonal Sachdev. Stroke: a global response is needed. *Bulletin of the World Health Organization* 2016;94:634-634A World Health Organisation. Department of Noncommunicable Diseases and Environmental Health, September 2015. Cardiovascular Diseases [Fact sheet]. Available from http://www.searo.who.int/india/topics/cardiovascular_diseases/factsheet_cvd_2015.pdf [cited 2019 May 16]
4. Dorairaj, Prabhakaran & Jeemon, Panniyammakal & Roy, Ambuj. Cardiovascular Diseases in India: Current Epidemiology and Future Directions 2016; *Circulation*. 133. 1605-1620. 10.1161/CIRCULATIONAHA.114.008729. Available from <https://www.ahajournals.org/doi/10.1161/CIRCULATIONAHA.114.008729>
5. Cardiovascular Diseases: Key Facts. World Health Organization; 2017. Available from [https://www.who.int/en/news-room/fact-sheets/detail/cardiovascular-diseases-\(cvds\)](https://www.who.int/en/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds)) [cited 2019 May 16].
6. Global Health Data Exchange: GBD Results Tool. Available from <http://ghdx.healthdata.org/gbd-results-tool> [cited 2019 May 16]